Appraisal Seattle, Renton and Southern Railway Company

by John H. Fletcher

1913

A Civil Engineering thesis of the University of Kansas

APPRAISAL

SEATTLE RENTON AND SOUTHERN RAILWAY COMPANY

JOHN H. FLETCHER

I N D E X

****

Seattle, March 28th, 1913.

Mr. D. W. McMorris,

Court Engineer.

Dear Sir:-

In accordance with your instructions, on December15th, 1912, I began the appraisal of that portion of the Seattle,Renton and Southern Railway Company within the city limits of Seattle. The Appraisal has been made as of March 1st, 1913, and covers all of the physical property, excepting real estate, of the said company which can be classified under the Interstate Commerce Commission's classification of Expenditures for Road and Equipment of Electrical Railways.

Extreme care has been exercised in determining quantities, prices, and depreciation, and I feel sure that you may rely upon them as being reasonably correct; however, your engineer was denied access to the company's records, thus making the work doubly hard, and impossible in some particulars to secure definite information. This narrow minded policy of the company almost convinces the writer that there must be something irregular about their bookkeeping.

Much credit, for whatever of merit there is in this report, is due to both Mr. W. M. Hitt and Mr. B. H. Petley, the gentlemen who assisted me in this work. The stenographic department very kindly assisted in shaping this report.

I trust that the report covers the needs of the City and meets with your approval.

Respectfully submitted, John H. Pletcher

H I S T O R Y.

For the purpose of a comprehensive understanding of this case, a short description of the Seattle, Renton & Southern Railway Company, taken from Poor's Manual, is quoted as follows:

From Poor's Manual - Street Railway Section, 1912, P.2406. Seattle, Renton & Southern Railway.

"History - Chartered in February, 1903, as successor to the Seattle & Renton Railway Company. The latter Company was chartered in 1890, for twenty-five years, as the Rainier Avenue Electric Railway Company; sold under foreclosure, Aug. 1, 1895, and succeeded by the Seattle & Rainier Beach Ry. Co. ; (Organized Aug.1895) Extension to Renton 4.5 mi. under the Charter of the Seattle & Renton Railway Company was completed in December, 1896, and leased to the Seattle & Rainier Beach Ry. Co. In February, 1899, The Seattle & Renton Ry. Co. purchased the Seattle & Rainier Beach Ry., issuing therefor $65,000 5% bonds, due in 1914.

"Capital Stock - Authorized and outstanding, (common), 1,000,000, preferred, 250,000) 1,250,000, Shares 100, Annual meeting July 1.

"Funded Debt outstanding consists of $725,000 first mortgage 5% bonds, dated 1908, due $30,000 May 1, 1913; $40,000, May 1, 1914; $50,000 each on May 1, 1915, 1916 and 1917; $60,000 annually each May 1, 1918 to 1923 inclusive; $70,000 May 1, 1924 and May 1, 1925 and $5,000 May 1, 1926; interest payable May and November at First National Bank, Chicago, Ill, and First National Bank, New York, N.Y. Coupon and registered bonds $500 and $1000 each. Trustee: First Trust & Savings Bank, Chicago, Ill. Authorized issue $1,000,000 of which $225,000 were issued for improvements, etc., and $500,000 to retire prior liens; $275,000 are reserved for future improvements, etc., at 70% of cost and only to be issued upon approval of Peabody, Houghteling & Co. Bonds are subject to call May 1,1913, or any interest date thereafter at 105 and interest.

"Directors - W. R. Crawford, F. J. Friend, Ern Mills, E.S. McCord, Seattle, Washington; Jas. P. Houghteling, Chicago, Ill. Officers - E. M. Mills, Pres. & Gen. Mgr., Seattle, Wash.; Jas. P. Houghteling, Vice President, Chicago, Ill.; F. J. Friend, Sec.; R. S. Singleton, Treas.; Geo. W. Harting, Superintendent, Seattle, Wash. General Office, Seattle, Wash.

"SEATTLE, RENTON & SOUTHERN RY. - There are outstanding

$300,000, one year, 6%, Collateral trust notes. The Company's former President, Wm. R. Crawford, as owner of the entire $1,000,000 common stock, has deposited same with the trsutee, Augustus S. Peabody, of these notes as collateral security, it being provided that this stock would be voted by the trustee during the life of theagreement. Interest on these notes is payable June and December. Judge Dykeman, in the State Court of Washington, on April 30, 1912, on application of the Company, former President William R. Crawford appointed Scott Calhoun as temporary receiver. Judge Frater in the Superior Court, in May, 1912, discharged the receiver. Judge H anford in the U. S. District Court at Seattle on May 14, 1912, on application of Peabody, Houghteling & Co. appointed the Company's President, E. M. Mills and O. D. Colvin, receivers. Scott Calhoun appointed receivers in April and discharged by the Superior Court has appealed to the State Supreme Court to be placed in charge of the property. The City of Seattle, on May 31,1912, under authority of the city ordinance passed on March 7, 1911, began condemnation proceedings in the Superior Court of the State of Washington for the acquisition of the portion of the road within the City Limits which it is desired to take over as part of the municipal car line."

"Note: - The appeal by Scott Calhoun to the State Supreme Court as noted above was affirmed (No. 10637), Department Two, November 14,1912). This was an appeal from an order of the Superior Court for King County, Grater, J., entered May 8, 1912, appointing a receiver, after a hearing before the court. Affirmed."

During the life of this railway there has been more or less friction between the Company and the City officials tending to retard any improvement or betterment of the line, which as a consequence prevented the natural and proper development of that section of Seattle tributary to this public carrier. This continued scrapping, together with the growing desire of the people to own and operate a municipal line culminated when Ordinance No. 25962 was passed.

"Ordinance No. 25962. - An Ordinance repealing Ordinance No.15919, entitled "An Ordinance granting to Wm. R. Crawford, his successors and assigns, a franchise to

construct, maintain and operate a system of street railways in the City of Seattle, (passed the City Council April 22, 1907, and became an ordinance pursuant to Sec.16, Art.4, of the City Charter, May 6, 1897) as amended by Ordinance No.25038 entitled "An Ordinance amending sections 2 and 4 of Ordinance No. 15919, entitled An Ordinance granting to W. R. Crawford, his successors and assigns, a franchise to construct, maintain and operate a system of street railways in the City of Seattle, passed the City Council April 22, 1907, and beaame an ordinance pursuant to Sec. 16 of Article 4 of the City Charter, May 6, 1907, accepted May 20,1907, passed the City Council Sept. 6, 1910, and approved by the Mayor, Sept. 15,1910, and declaring all rights of way granted thereunder and all rights, privileges and benefits conferred thereby to be forfeited and to be null and void and of no force or effect. Published December 2, 1910.

Then followed Ordinance No. 26069 -

Ordinance No, 26069 - An Ordinance declaring the advisability of a city electric railway on Rainier Avenue and other streets, avenues and ways and providing for the same, specifying and adopting the system or plan proposed, declaring the estimated cost thereof, as near as may be, and providing for the submission of such system or plan and the incurring of an indebtedness therefor to the qualified voters of the city for their adoption and assent thereto or for their rejection thereof at a special election to be held on the day of the sp ecial election on the seventh day of March,1911. Published January 13, 1911.

Immediately following the passage of this Ordinance an appraisal of the Seattle, Renton & Southern Railway was made as evidenced by the following letter:-

June 27,1911

"Honorable Board of Public Works,
Seattle, Washington.
G entlemen:

Your committee appointed to consider the appraisal of the existing electric railway on Rainier Avenue and other streets within the city limits as provided by Ordinance No.26069, said electric railway being owned and operated by the Seattle, Renton & Southern Railway Company, beg to submit the following report:

Value, of Track, including all facilities	198286.45
Value of Cars and other equipment	130887.49
Value of Tract 30,Morningside Acre Tracts occupied by car barns,machine shops, etc.	15000.00

Value of building, including machinery and equipment 41879.75

TOTAL VALUATION - - - - - - - - - - - - -$386053.69

We are advised by the Corporation Counsel, as per attached opinion, that no allowance should be made for the private right-of-way claimed by the Company.

We further recommend that the enclosed resolution be passed by the Board of Public Works and submitted with this appraisal to the City Council.

Very respectfully,

(SIGNED) R. H. THOMSON,
A.H.DIMOCK
(SIGNED) J.D.ROSS
(SIGNED) A.L.VALENTINE
COMMITTEE

Next followed Resolution No.3264.

(The following data from 95-C-23 Public Utility File.)

Resolution No.3264 - Whereas the Board of Public Works, pursuant to Ordinance No.26069, has made an appraisal of the property of the Seattle, Renton &Southern Railway Company within the City limits, suitable and necessary for use as part of the electric railway system specified in said ordinance and submitted the same to this body, and -

Whereas, it appears that the valuation of Three Hundred Eighty-six Thousand Fifty-three and Sixty-nine hundredths ($386053.69) placed upon said property by said board is the reasonable and just valuation thereof.

Now, Therefore, Be it resolved by the City of Seattle as follows:

Section 1. That the Board of Public Works be and it hereby is authorized and directed to certify said appraisal in the sum of Three Hundred Eighty-six Thousand Fifty-three and sixty-nine hundredths dollars ($386053.69) to the owners of said property for their consideration.

Passed the City Council the 3rd day of July,1911, and signed by me in open session in authentication of its passage, this third day of July,1911.

(SIGNED) Max Wardall,
President of the City Council.

A tender was made to Wm. R. Crawford by letter of date July, 1911, Mr. Crawford refused to sell this railroad for $386053.69, then followed Ordinance No.28134.

Ordinance No.28134 - An Ordinance providing for the condemnation, appropriation, taking and damaging of all that certain line of electric street railway herein described and owned and operated by the Seattle, Renton &

Southern Railway Company, within the limits of the City of Seattle, together with all private rights, privileges, easements, equipment and appurtenances, if any, appertaining and used in and about the operation and maintenance thereof, and all right, title and interest of said companyand of all other persons or corporations therein, and providing for the payment of the just compensation to be made therefor.

This ordinance was passed March 7, 1911, but the City did not begin condemnation proceedings until May 31, 1912.

PURPOSE AND SCOPE OF THIS APPRAISAL.

At the time this appraisal was started the City expected, soon, to reach that certain stage in its condemnation proceedings when the case could be tried on its merits, consequently certain facts, figures and data had to be collected. A logical question presents itself here: -

What facts, figures and data must be presented to the Court for its study and deliberation in order that a just and fair value of the property to be condemned may be determined. In this day of political and financial evolution, Property, it is claimed, has different values for different purposes;

1st. Value for rate-making purposes,
2nd. A Value for sale purposes,
3rd. A Value for condemnation purposes,
4th. A Value for taxation purposes,
5th. A Value for capitalization purposes.

The value for rate-making purposes may differ from the value for sale purposes in that a public service commission usually bases its rates on a fair value of the operated property only. Thus a handsome piece of real estate owned but not required for the operation of a railroad property would not be included in its value for rate-making purposes. The value for sale purposes

might be termed the market value of the property and may differ from the value for condemnation purposes in that condemnation implies in some cases a penalty for failure of contract. While there may be different values of property for different purposes, your engineer contends for all practical purposes, the facts, figures and data necessary in order to determine any value are similar and in general were well designed by Judge Harlan in that well-known case of Smyth vs. Ames, 169 U.S. 466, decided in 1898, which reads as follows:

> "We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used by it for the convenience of the public. And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property. What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience."

From an analysis of Judge Harlan's comprehensive statement by the Public Service Commission of the Second District, State of New York, in the matter of the application of the Westchester Street Railroad Company for authorization to issue capital stock decided April 24,1912, we quote:-

> "This method of arriving at the 'value' of the property of a public corporation has been very extensively cited as well as lauded in unstinted language. It demands analysis and study. The problem is stated by the learned court to be the ascertainment of the 'fair value of the property being used by it (the corporation) for the convenience of the public."

It then proceeds as follows, the language being divided by me for convenience of reference into numbered paragraphs.

And in order to ascertain that value -

(1) The original cost of construction,
(2) The amount expended in permanent improvements,
(3) The amount and market value of its bonds and stock,
(4) The present as compared with the original cost of construction.
(5) The probable earning capacity of the property under particular rules prescribed by statute.
(6) And the sum required to meet operating expenses.

are all matters for consideration and are to be given such weight as may be just and right in each case.

It will be observed that paragraphs numbered 1 and 2 are essentially the same, the only distinction between thembeing time of construction and may be summarized briefly but correctly as cost of property. Paragraph numbered 4 is nothing more or less than reproductive cost, coupled with a suggestion that such reproductive cost, should be compared with actual cost. Paragraph numbered three calls attention to the commercial valuation method of arriving at value. Paragraphs 5 and 6 are only one way of stating net earning power as a basis of determining value.

Reduced to concise language and stated in terms having a well known and definite meaning, the court merely says that in determining value the matters for consideration include:-

(1) Cost of property,
(2) Reproductive cost,
(3) Commercial value,
(4) Net earning power,

It does not limit consideration to these matters, but expressly recognizes there may be others, offering, however, no indication of what they may be."

Your engineer defines and understands (1) Cost of Property, as the original cost of plant as shown by the company's books. (2) Reproductive Cost as the cost of reproducing the plant new minus depreciation or, in other words, as designed by the Public Service Commission of the State of Washington, depreciated value. (3) Commercial value as the market value of stocks and bonds. (4) Net earning power, is related to the value of a plant in that the value may be determined in some instances by capitalizing the net earnings.

Finally, in making this appraisal there are five predominant matters for consideration.

(1) The original cost of plant as shown by company's books;

(2) Cost of reproduction new;
(3) Depreciated value;
(4) Commercial value;
(5) Net earning power;

Manifestly it is impossible for your engineer to determine Nos. 1 and 5, as he does not have access to the company's books and records. No. 4, commercial value, is a vague and indefinite thing and cannot be of much weight unless the stocks and bonds are well known and prices quoted from day to day. Hence we have left two things to determine, the cost of reproduction new and the depreciated value.

COST OF REPRODUCTION.

Three ~~months~~ methods are sometimes used in determining the cost of reproduction; viz., the Replacement Method which is worked out by designing an entirely different and modern plant to serve the same community; next, the Historical Method, which is an attempt to determine the plant investment as it was actually constructed year by year, using prices of the time of construction. If the books of the Company have been properly kept this cost of reproduction will be the same as "Plant Account"; and third, the Washington Method, defined by Mr. H. L. Gray as a method, "which takes into account the reconstruction of the plant under existing conditions, disregarding altogether the manner in which it was built." For our case the replacement method is obviously unfair and would lead to endless and varied results. If the historical method were desirable, your engineer could not apply it for the lack of the necessary records, but the Washington method is the one best suited

as well as the method adopted by our State Public Service Commission. Quoting again from Mr. G ray, page 61 of his Report on Everett Railway, Light and Water Company;

> The Washington method, however, will adequately serve our needs, as the purpose is to prepare a statement of the probable cost of reproducing the plant on a definite date, under existing conditions. This later method will naturally require the use of prices prevailing at the date of the estimate, although repeated investigations have demonstrated that such prices will differ but little from the average of prices prevailing over the five year period previous to the date of appraisal. It also eliminates the question of the increased cost of piecemeal construction, although anyone conducting an appraisal of this nature will be compelled to base prices upon the cost of work in progress, which in a way will recognize piecemeal construction. In fact, it is not altogether clear that piecemeal construction will be more expensive than the construction of a plant as a whole. Plants are generally constructed during the period of general activity, when labor is scarce, and material difficult to obtain; hence it is possible that piecemeal construction performed without the necessity of haste, and always with cheaper labor, might actually result in a reduced cost, rather than an increased cost. In view of the facts, the historical method has been altogether ignored in this case, and an estimate has been prepared in accordance with the Washington Method."

Having decided upon the general method for determining the cost of reproduction, we next adopted a suitable classification of accounts which meets the requirements and covers all the property that the City proposes to condemn. Fortunately the Interstate Commerce Commission, in its wisdom, has adopted such a system of accounts, in accordance with which your engineer has calculated the cost of reproduction for all the:-

PHYSICAL AND PERSONAL PROPERTY OF THE SEATTLE, RENTON & SOUTHERN RAILWAY COMPANY WITHIN THE LIMITS OF THE CITY OF SEATTLE, KING COUNTY, STATE OF WASHINGTON

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In General this includes all the Physical and Personal Property of said Company lying within the limits of said city, which (said property) can be Classified under the Interstate Commerce Commission's Classification of Expenditures for road and equipment of Electric Railways, as follows:-

GENERAL ACCOUNTS.

Account.

I. Road,
II. Equipment,
III. General Expenditures,

PRIMARY ACCOUNTS.

I. Road.

1. Engineering and Superintendence,
4. Grading,
5. Ballast,
6. Ties,
7. Rails, Rail Fastenings and Joints,
8. Special Work,
9. Underground construction,
10. Paving,
11. Track laying and surfacing,
12. Roadway Tools,
13. Tunnels,
14. Elevated Structures and Foundations,
15. Bridges, Trestles and Culverts,
16. Crossings, Fences, Cattle Guards and Signs,
17. Interlocking and other Signal Apparatus,
18. Telegraph and Telephone Lines,
19. Poles & Fixtures,
20. Underground conduits,
21. Transmission System,
22. Distribution System,
23. Dams, Canals and Pipe Lines,
24. Power-Plant Buildings,
25. Substation Buildings,
26. General Office Buildings,
27. Shops and Carhouses,
28. Stations, Waiting Rooms and Miscellaneous Buildings,
29. Docks and Wharves,
30. Power-Plant Equipment,
31. Substation Equipment,
32. Shop Equipment,
33. Park and Resort Property,
34. Cost of Road Purchased,

II. Equipment

33. Cars,
36. Locomotives,
37. Electric Equipment ofmCars,
38. Other Rail Equipment,
39. Miscellaneous Equipment,

III. General Expenditures

40. Law Expenses.

41. Interest
42. Injuries and Damages,
43. Taxes,
44. Miscellaneous

Included in the above classified accounts are -

1st. The Main Line with all of its siding, spur, Y, loop, crossover and industrial track connections including the overhead trolley and feeder construction. The said Main Line being known and designed as that portion of the said Company's tracks which begins at the intersection of Fourth Avenue and Stewart Street; thence running south on Fourth Avenue to Yesler Way; thence south on Fourth Avenue South to Main Street; thence east on Main Street to Fifth Avenue South; thence south on Fifth Avenue South to King Street; thence east on King Street to Rainier Avenue; thence on and along Rainier Avenue in a southerly direction to the city limits of Seattle at Ryan Street.

2nd. The Washington Street line with all of its siding, spur, crossover and industrial track connections, including the overhead trolley and feeder construction. The said Washington Street line being known and designed as that portion of said Company's tracks which begin at the intersection of Rainier Avenue and King Street; thence running north on Rainier Avenue to Jackson Street; thence north on Fourteenth Avenue South to Washington Street; thence west on Washington Avenue to the end of the line at a point between First Avenue South and Railroad Avenue.

3rd. The Hudson Street Line with its industrial track connection, including the overhead trolley and feeder construction.

The said Hudson Street Line being known and designated as that portion of the said company's tracks, which begins at the intersection of Rainier Avenue and Hudson street; thence running west on Hudson Street to Thirty-fifth Avenue South; thence south on Thirty-fifth Avenue South to the end of the line.

4th. All that portion of said company's rolling stock equipment necessary to the proper operation of the said company's property, within the limits of Seattle.

5th. All of the buildings, including offices, car barns, shops, sand house and substations with their equipment and machinery.

6th. Any and all of said Company's property lying within the limits of Seattle, whichcan be classified under the aforesaid Classification of Accounts.

Obviously such a system of accounts will have to be modified to meet conditions of the property at hand. Some of the accounts are not a part of this plant; dams, canals, pipe lines and power plants for instance. Accounts Nos.2 and 3, relating to real estate, are being cared for by others than the writer.

The estimated Cost of Reproduction New of the physical and personal property, excepting real estate, of the Seattle, Renton & Southern Railway Company, lying within the city limits of Seattle, made as of March 1st, 1913, amounts in total to $783,265.00; the detailed estimate will be found on the blue sheets of this report. These details are made up of two elements, quantities and prices. The quantities were secured from all available sources, by personal inspection, and measurement, from old maps and profiles, and from various persons more or less familiar with the property.

The prices are based upon quotations for the last five years, judgment, and probable future quotations.

The information on the blue sheets represents a great volume of detail work. Some of the accounts are self-explanatory while others are based upon assumptions, principles and practices characteristic of appraisal work. The very first account, that of grading, is perhaps the most uncertain one of all, for it is absolutely necessary to make assumptions. What are we to reproduce new? Are we to assume nature's original ground line, thereby obtaining the quantities of earth work to remove in order to duplicate the present roadbed? Certainly not, because the company did not stand all that expense. Shall we assume no railroad there at all, but graded streets as might be imagined, upon which we are to build a similar railroad? This might be fair and it might not be fair. Your engineer considers fair, what the company actually expended in a legitimate way on the present operated road bed. The Company may be able to show such an approximate sum, but your engineer must make assumptions, accordingly; on all paved and planked streets, excepting Rainier Avenue, there was assumed to be no car line; consequently to build lines on these streets it would be necessary to remove strips of pavement and excavate for the concrete base and ties. This, you may say is not fair to the City because the company did not have to tear up and remove pavement. However, you will note that the amounts for this work are not large, that the company must have done some grading for these lines, also certain decisions have sustained such an assumption. A decision of the Circuit Court of the United States for the Southern District of New York, in the case of Wilcox, vs. Consolidated Bar Company (157 Fed. Rep. 849-50) says:-

> "It is equally immaterial that such value is affected by difficulties of reproduction. If it be true that a pipe line under the City of New York of 1907 is worth more than was a pipe line under the City of 1827, then the owner thereof owns that value, and that such value arose wholly or partly from difficulties of duplication created by the City itself is a matter of no moment."

For all other grading, your engineer estimates the probable amount of earthwork actually paid for by the company, obtaining quantities from profiles and by means of measurements and inspection in the field. Undoubtedly the question of extra expense for track maintenance during the Jackson and Dearborn Street regrade construction periods will be an important matter for the court to decide. How much it was; should it be charged to plant account or operating expenses; and how much, if any, of that expense should the City be required to stand? All data pertaining to this extra expense must come from the Company's records.

The accounts covering rails, fastenings and joints and special work required much careful work. To determine from a railsection measured in the field whether it is a 70# rail, or a 72# rail, or by the same measure to distinguish a 55# from a 56# rail is rather unsatisfactory. Your engineer has classified the rail as 30#, 35#, 50#, 55#, 56#, 60#, 72# and 80#, while some special work is 90#. There may be no 55# rail at all and there may be some 40# rail. If all of the 55# were charged to 56#, only $45.00 would be added to the estimate. Undoubtedly the total rail quantities are practically correct.

All of the property, excepting stores, on the Company's lot at Columbia city, including the buildings, substation and shop equipment, furniture and fixtures, etc., was handled as a lump estimate. We were not permitted to go onthe premises to get first hand information; however, the estimate of $60,000.00 covering

those accounts is a close approximation. Even if the court evidence should show a large error for this account, the sum involved will be but a small per cent. of thetotal plant value. It would not pay to quarrel with a man over a cent's difference in the price of a dollar dog.

In order to make a reliable estimate on the rolling stock, your engineer was put to much inconvenience and extra work for here again he had to resort to detective methods. Some of the individual car estimates may be incorrect, but the account as a whole is practically correct. If in error it is large and in favor of the Company.

The loading charges, under which are classified, engineering, superintendence and organization expense, interest during construction and contingencies are in accordance with the practice of the Public Service Commission of this State. The per cents allowed being 10, 2½ and 5 respectively, have proved out in similar cases where a comparison with the actual book cost was possible. If your engineer had had access to the records of the company the charge for contingencies could have been reduced to 2½% on account of having more definite information concerning certain accounts. As will be noted, no allowance was made for discount on bonds or for broker's fees. Your engineer does not consider that these two items have a place in an estimate of the cost of reproduction. If equity and justice make such values legitimate in certain cases on account of business hazzard, they should be treated as such and not confused with the cost of ~~construction~~ reproduction. A $2,000 house is worth $2,000 whether the builder used his own cash or organized a company and secured the money at a discount. The "hazzard of the business" has become an hackneyed expression used by all money jugglers in their pleas

before public service commissions and courts. Corporation attorneys dwell upon it in glee, and use the term as glibly as a fond parent repeats to his child the "goblins will get you if you don't watch out." As a matter of fact, the banker puts the discount in his pocket and sells the bonds to innocent purchasers who in reality carry the hazzard of the business. The bereavement and sorrow displayed by money sharks when testifying before our courts and commissions, in favor of the innocent purchaser, is touching to say the least. However, it never occurs to them to return their unearned wealthto the properties robbed.

CONDENSED ESTIMATE OF REPRODUCTION COST
March 1st, 1913

GENERAL ACCOUNT ROAD:-
PRIMARY ACCOUNTS:-

4.	Grading,	$ 61659.00
5.	Ballast,	14460.00
6.	Ties,	21668.00
7.	Rails, Fastenings and Joints,	70626.00
8.	Special Work,	43835.00
10.	Paving,	63597.00
11.	Track-laying, etc.	35184.00
15.	Bridges, Trestles and Culverts,	14029.00
16.	Crosses, Fences, Cattle Guards and Signs,	1720.00
17.	Interlocking and other Signal Apparatus,	1014.00
18.	Telegraph and Telephone Lines,	453.00
19.	Poles and Fixtures,	10718.00
22.	Distribution System,	30678.00
28.	Stations, Waiting-rooms, etc.	2111.00
12, 25, 26, 27, 31 and 32,	Engineering, Superintendence and Organization Expense,	60000.00
	Interest during construction,	43175.00
	Contingencies,	11873.00
	Stores,	24340.00
		7500.00
GENERAL ACCOUNT EQUIPMENT:-		264625.00
TOTAL, NOT INCLUDING REAL ESTATE, - - - - - - - - -		$783265.00

ESTIMATED COST OF REPRODUCTION

MARCH 1st, 1913

GENERAL ACCOUNT ROAD:
PRIMARY ACCOUNT NO. 4 GRADING:
MAIN LINE:

Brick Pavement torn up	Sq. Yds	8331	0.60	4999.00
Asphalt Pavement torn up	Sq. Yds	712	0.60	427.00
Wood B. Pavement torn up	Sq. Yds	1340	0.60	804.00
Stone B. Pavement torn up	Sq. Yds	151	0.60	91.00
Planking torn up	Sq. Yds	9183	0.08	735.00
Earth Wodk	Cu. Yds	100000	.50	50000.00
Clearing and grubbing	Acres	10	150.00	1500.00
				58556.00

WASHINGTON STREET LINE:

B rick Pavement torn up	Sq. Yds	1143	0.60	686.00
Stone B. Pavement torn up	Sq. Yds	1616	0.60	970.00
A sphalt Pavement torn up	Sq. Yds.	889	0.60	533.00
Earthwork	Cu. Yds.	828	0.50	414.00
				2603.00

HUDSON STREET LINE:

Earthwork	Cu. Yds.	1000	0.50	500.00
	Grand Total of Account			61659.00

GENERAL ACCOUNT ROAD:
PRIMARY ACCOUNT NO. 5 BALLAST:
MAIN LINE:

Gravel Ballast delivered along side of track	Cu. Yds.	22090	0.65	14359.00

WASHINGTON STREET LINE:

Gravel Ballast Delivered along side of track	Cu. Yds.	110	0.65	72.00

HUDSON STREET LINE:

Gravel Ballast delivered along side of track	Cu. Yds.	44	0.65	29.00
	Grand Total of Account			14460.00

GENERAL ACCOUNT ROAD:
PRIMARY ACCOUNT NO. 6 TIES:
MAIN LINE:

Cross Ties,6"x8"x7'	Number	6986	0.28	1956.00
Cross Ties,7"x9"x8'	Number	39580	0.42	16624.00
Bridge Cross Ties,6"x8"x10'	Number	1972	0.40	789.00
Bridge Cross Ties,6"x8"x8'	Number	48	0.32	15.00
Bridge Cross Ties,7" x10"x8'	Number	258	0.47	121.00
S witch Tie Sets,No.1	Number	44	12.00	528.00
Switch Tie Sets,No.2	Number	8	17.00	136.00
Stringers,	F.B.M.	14.1	12.00M	169.00
				20338.00

WASHINGTON STREET LINE:

Cross Ties,6x8x7	Number	2776	0.28	777.00
Cross Ties,7x9x8	Number	194	0.42	81.00
Switch Tie Sets,No.1	Number	6	12.00	72.00
				930.00

HUDSON STREET LINE:

Cross Ties,6x8x8	Number	1284	0.28	360.00
Bridge Cross Ties,6x8x8	Number	100	0.28	28.00
Switch Tie Sets,No.1	Number	1	12.00	12.00
				400.00
	Grand Total of Account			21668.00

GENERAL ACCOUNT--ROAD:
PRIMARY ACCOUNT NO. 7? RAILS, FASTENINGS AND JOINTS:
MAIN LINE:

Steel Rails,60'-80# High Section	Gross Tons	225.66	$52.00		11734
Steel Rails,30'-60# Low Section	Gross Tons	483.95	40.00		19358
Steel Rails,30'-56# Low Section	Gross Tons	326.37	40.00		13055
Steel Rails,30'-55# Low Section	Gross Tons	59.22	40.00		2369
Steel Rails,30'-50# Low Section	Gross Tons	201.71	40.00		8068
Steel Rails,30'-35# Low Section	Gross Tons	1.56	40.00		62
Steel Rails,30'-30# Low Section	Gross Tons	2.14	40.00		86
Angle Bars,6 hole - 80#	Pairs	324	1.96		635
Angle Bars, 4 hole - 60#	Pairs	1087	1.16		2096
Angle Bars, 4 hole -56#	Pairs	1306	1.05		1371
Angle Bars, 4 hole-55#	Pairs	271	1.05		285
Angle Bars, 4 hole - 50#	Pairs	903	0.91		822
Angle Bars, 4 hole - 35#	Pairs	10	0.40		4
Angle Bars,4 hole - 30#	Pairs	16	0.33		5
Track Bolts,for 80#-1"x3½"	Pounds	2851	3.50	C	100
Track Bolts,for 60#-¾" x ½"	Pounds	10152	3.50	C	355
Track Bolts, for 50#-¾ x 3¼	Pounds	2619	3.50	C	92
Track Bolts,for 30#&35#-9/16" x2½" "		39	3.50	C	1
Nut Locks, 3/4"	Number	18000	9.00	M	162
Nut Locks,1"	Number	2000	10.00	M	20
Spikes,9/16 x 5½	Pounds	117400	3.00	C	3522
Tie Plates	Number	1200	0.15		180
Rail Braces	Number	800	0.13		104

PRIMARY ACCOUNT NO. 7, RAILS, FASTENINGS & JOINTS CONTINUED:
WASHINGTON STREET LINE:-

Steel Rails,60'-72# High Section	Gross Tons	44.19	52.00	2298
Steel Rails,30'-56# Low Section	Gross Tons	6.51	40.00	260
Steel Rails,30'-60# Low Section	Gross Tons	20.46	40.00	818
Angle Bars,6 hole-72#	Pairs	67.00	2.00	134
Angle Bars,4 hole-56#	Pairs	26.00	1.05	27
Angle Bars,4 hole-60#	Pairs	80.00	1.16	93
Track Bolts, 72#,1"x4"	Pounds	616.	3.50 C	22
Track Bolts, 3/4 x 3 1/2	Pounds	318.	3.50 C	11
Nut Locks, 3/4"	Number	424.	9.00 M	4
Nut Locks, 1"	Number	402.	10.00 M	4
Spikes, 9/16 x 5 1/2	Pounds	6918.	3.00 C	208
				3879

HUDSON STREET LINE:-

Steel Rails,30'-60# Low Section	Gross Tons	0.77	40.00	31.00
Steel Rails,30'-35# Low Section	Gross Tons	16.61	40.00	664.00
Steel Rails,30'-30# Low Section	Gross Tons	2.02	40.00	81.00
Angle Bars,4 hole - 60#	Pairs	4.00	1.16	5.00
Angle,Bars,4 hole - 35#	Pairs	107.00	0.40	43.00
Angle Bars,4 hole - 30#	Pairs	10.00	0.33	3.00
Track Bolts, 3/4 x 3 1/2	Pounds	12.00	3.50 C	1.00
Track Bolts, 9/16 x 2 1/2	Pounds	176.00	3.50 C	6.00
Nut Locks, 3/4"	Number	500.00	9.00 M	5.00
Spikes, 9/16 x 5 1/2	Pounds	3230.00	3.00 C	97.00
				936.00

INDUSTRIAL TRACKS:-

Steel Rails,30'-60#,Low Section,	Gross Tons	2.50	40.00	100.00
Steel Rails, 30'-50#Low Section,	Gross Tons	1.49	40.00	60.00
Steel Rails,30'-35# Low Section	Gross Tons	12.90	40.00	516.00
Steel Rails,30'-30# Low Section	Gross Tons	10.74	40.00	430.00
Angle Bars,4 hole - 60#	Pairs	10.00	1.16	12.00
Angle Bars, 4 hole - 50#	Pairs	17.00	0.91	15.00
Angle Bars,4 hole - 35#	Pairs	83.00	0.40	33.00
Angle Bars,4 hole - 30#	Pairs	81.00	0.33	27.00
Track Bolts,3/4" x 3 1/2"	Pounds	30.00	3.50 C	1.00
Track Bolts, 3/4" x 3 1/4"	Pounds	49.00	3.50 C	2.00
Track Bolts, 9/16"x 2 1/2"	Pounds	246.00	3.50 C	9.00
Nut Locks, 3/4"	Number	200.00	9.00 M	2.00
Spikes, 9/16 x 5 1/2"	Pounds	3930.00	3.00 C	118.00
				1325.00

Grand total of account - - - - - - - 70626.00

GENERAL ACCOUNT - ROAD -

PRIMARY ACCOUNT NO. 8 SPECIAL WORK:

MAIN LINE:-

Turnout Ends 80# H.Section Standard No.1	Number	1 @	500.00	500.00
Turnout Ends 80# H.Section Standard No. 2	Number	2 @	450.00	900.00
Turnout Ends 80# H.Section Standard No.3	Number	6 @	430.00	2580.00
Turnout Ends 60# L.Section Standard No.4	Number	3 @	300.00	900.00
Turnout Ends 60# L.Section Standard No.5	Number	23@	210.00	4830.00
Turnout Ends 60# L.Section Standard No.6	Number	5 @	175.00	875.00
Turnout Ends,50# L.Section Standard No.7	Number	2 @	185.00	370.00
Cross-Overs 60# L.Section Standard No.1	Number	1 @	550.00	550.00
Cross-overs 60# L.Section Standard No.2	Number	3 @	360.00	1080.00
Crossings Single Track 60# R.on Acute Angle "		2 @	240.00	480.00
Crossings S.T.80# H.Sec.on Acute Angle Curve"		2 @	350.00	700.00
Crossings,S.D.T.80# H.Sec.Acute Angle with Hard Center	Number	1 @	970.00	970.00
Crossings S.D.T.80# H.Sect.Right Angle with Hard Center	Number	1 @	600.00	600.00
Crossings,D.D.T.80# H.Sec.Right Angle with Hard Center	Number	1 @	1200.00	1200.00
Crossings,D.D.T.80# H.Sec.Right Angle	Number	2 @	800.00	1600.00
Crossings,D.D.T.90#,Cast Steel over Table Ts "		2 @	2000.00	4000.00
Crossings,D.D.T.60#,L.Sec.on Right Angle	Number	2 @	600.00	1200.00
Special Work at 4th Ave.&Main St.	Estimated			1000.00
Curved Rail,80# H.Sec.with Guard Rail,	Lin.Ft. 493 @		1.40	690.00
Curved Rail,80# H.Sec. without G.R.	Lin.Ft.1221 @		0.72	879.00
Curved Rail,60# L.Sec.without G.R.	Lin.Ft.9102 @		0.45	4096.00
Curved Rail,56# L.Sec.without G.R.	Lin.Ft.9748 @		0.42	4094.00
Curved Rail,55# L.Sec.without G.R.	Lin. Ft. 120 @		0.41	49.00
Curved Rail,50# L.Sec.without G.R.	Lin.Ft.5722 @		0.37	2117.00
Curved Rail,35# L.Sec.without G.R.	Lin.Ft. 354 @		0.25	89.00
Curved Rail (G) 35#	Lin.Ft.5004 @		0.45	2252.00
Tie Plates	Number 500 @		0.15	75.00
Rail Braces	Number 1000 @		0.13	130.00
				38806.00

WASHINGTON STREET LINE:-

Turnout Ends,72# H.Sec.Standard No.	Number	2 @	420.00	840.00
Turnout Ends,60# L.Sec.Standard No.4	Number	3 @	300.00	900.00
Turnout Ends,50# L.Sec.Standard No.8	Number	1 @	150.00	150.00
Crossing D.D.T.72# H.Sec.Right Angle	Number	1 @	720.00	720.00
Crossing S.D.T.60# L.Sec.Right Angle	Number	1 @	430.00	430.00
Curved Rail,72# H.Sec.with Guard Rail	Lin.Ft.	400 @	1.33	532.00
Curved Rail,72# H.Sec.without G.R.	Lin.Ft.	400 @	0.66	264.00
				3836.00

HUDSON STREET LINE:-

Turnout Ends,50# L.Sec.Standard No.8	Number	1 @	150.00	150.00
Curved Rail, 60# L.Sec.without G.R.	Lin.Ft.	128 @	0.45	58.00
Curved Rail, 35# L.Sec.without G.R.	Lin.Ft.	634 @	0.25	159.00
Curved G.Rail 35#	Lin.Ft.	381 @	0.45	171.00
				538.00

INDUSTRIAL SPURS:-

Turnout Ends,50# L.Sec.Standard No.8	Number	3 @	150.00	450.00
Curved Rail,50# L.Sec. Sixx without G.R.	Lin.Ft	408@	0.37	151.00
Curved Guard Rail,35#	Lin.Ft.	120 @	0.45	54.00
				655.00

PRIMARY ACCOUNT NO. 8 SPECIAL WORK (CONTINUED)

Grand total - - - - - - - - - -43835.00

GENERAL ACCOUNT ROAD:-
PRIMARY ACCOUNT NO.10 PAVEMENT:-
MAIN LINE:-

Brick Pavement,Double Track	Lin.Ft.	3601	7.70		27728.00
Brick Pavement,Single Track	Lin.Ft.	1273	3.50		4456.00
Asphalt Pavement,Double Track	Lin.Ft.	284	6.85		1945.00
Asphalt Pavement,Single Track	Lin.Ft.	165	3.20		528.00
Wood B,Pavement ,Double Track	Lin.Ft.	666	8.75		5828.00
Stone B.Pavement,Single Track	Lin.Ft.	176	4.15		730.00
Planking Double Track	Lin.Ft.	4363	1.25		5454.00
Planking,Single Track	Lin.Ft.	478	0.51		244.00
Brick Pavement	Sq.Yds.	304	2.85		866.00
Stone B.Pavement	Sq.Yds.	9	3.65		33.00
					47812.00

WASHINGTON STREET LINE:-

Stone B. Pavement,Double Track	Lin.Ft.	645	9.70		6257.00
Asphalt Pavement, Double Track	Lin.Ft.	425	8.05		3421.00
Asphalt Pavement, Single Track	Lin.Ft.	40	3.80		152.00
Brick Pavement, Double Track	Lin.Ft.	109	7.70		839.00
Brick Pavement,Single Track	Lin.Ft.	1040	3.50		3640.00
Stone BPavement, Double Track	Lin.Ft.	77	9.20		708.00
Stone B.Pavement Single Track	Lin.Ft.	185	4.15		768.00
					15785.00
Grand Total of Account - - - - -					63597.00

GENERAL ACCOUNT ROAD:-
PRIMARY ACCOUNT NO. 11 TRACK LAYING AND SURFACING:-
MAIN LINE:-

Track Laid and Surfaced	Miles	2	@	1500.00	3000.00
Track Laid and Surfaced	Miles	14.97	@	1150.00	17216.00
Turn Out Ends, Placed	Number	9	@	50.00	450.00
Turn Out Ends, Placed,	Number	33	@	35.00	1155.00
Cross-Overs,Placed	Number	3	@	70.00	210.00
Crossings,80#,Placed	Number	2	@	50.00	100.00
Crossings,80#,Placed	Number	1	@	350.00	350.00
Crossings,80#,Placed	Number	1	@	200.00	200.00
Crossings,80#,Placed	Number	1	@	500.00	500.00
Crossings,80#,Placed	Number	2	@	400.00	800.00
Crossings,Cable Placed	Number	2	@	800.00	1600.00
Crossings,60#,Placed	Number	2	@	35.00	70.00
Crossings,60#,Placed	Number	2	@	300.00	600.00
Special Work 4th & Marion	Estimated				200.00
Ballast,Labor of Placing	Cu.Yds.	22090	@	.30	6627.00
					53078.00

WASHINGTON STREET LINE:-

Track Laid & Surfaced	Miles	0.494	@	1500.00	741.00
Track Laid & Surfaced	Miles	0.28	@	1150.00	322.00
Turnout Ends, Placed	Number	3.00	@	50.00	150.00

PRIMARY ACCOUNT NO. 11 TRACK LAYING AND SURFACING (CONTD)
WASHINGTON STREET LINE, CONTD.

Turnout Ends, Placed, Number	2 @	35.00	70.00
Crossings, 72# Placed, Number	1 @	400.00	400.00
Ballast Labor of Placing Cu Yd.	110 @	.30	33.00
			1716.00

HUDSON STREET LINE:

Track Laid and Surfaced Miles	0.44 @	800.00	352.00
Turn Out Ends, Placed Number	1. @	25.00	25.00
B allast Labor of Placing Du.Yds.	44. @	.30	13.00
			390.00
Grand Total of Account			35184.00

GENERAL ACCOUNT ROAD
PRIMARY ACCOUNT NO. 15, BRIDGES, TRESTLES AND CULVERTS:
MAIN LINE:

Trestles				
Piles	Lin.Ft.	21745 @	0.25	5436.00
Timber,	F.B.M.	268000 @	20.00 M	5360.00
Iron	Lbs.	20262 @	0.05	1013.00
Cribbing:				
Log cribbing	Lin.F t.	6000 @	0.15	900.00
Timber	F.B.M.	1400 @	25.00M	36.00
Culverts:				
Catch Basins	Number	6 @	75.00	450.00
Timber	F.B.M.	20000 @	20.00 M	400.00
Sewer Pipe,20"	Lin.Ft.	24 @	3.50	84.00
				13679.00
WASHINGTON STREET LINE:				
Sewer Pipe	Estimated			60.00
Iron	Estimated			60.00
				120.00
HUDSON STREET LINE:				
Timber	F.B.M.	10000 @	20.00 M	200.00
Iron	Lbs.	600 @	0.05	30.00
				230.00
Grand Total of Account. .				$14029.00

GENERAL ACCOUNT ROAD:
PRIMARY ACCOUNT NO. 16 CROSSINGS
MAIN LINE

Timber	F.B.M.	74000 @	20.00 M	1480.00
WASHINGTON STREET LINE:				
Timber	F.B.M.	2000 @	20.00M	40.00
HUDSON STREET LINE:				
Timber	F.B.M.	10000 @	20.00M	200.00
Grand Total of Account				$ 1720.00

GENERAL ACCOUNT ROAD:
PRIMARY ACCOUNT NO. 17, SIGNAL APPARATUS:
SIGNAL APPARATUS, MAIN LINE, NEW PART:

Signal Light, Single,	Number	5	1.83	9.00
Signal Light, Double	Number	15	2.32	35.00
Signal Light, "Y" Type	Number	1	3.00	3.00
Switch, Type B, Single	Number	4	4.54	18.00
Switch, Type B, Double	Number	5	6.54	33.00
#12 D.B.W.P. Iron in Place	Loop Miles	2.579	70.07	181.00
				$ 279.00

SIGNAL APPARATUS, MAIN LINE, OLD PART:

Signal Light, Single	Number	16	1.83	29.00
Signal Light, Double	Number	14	2.32	32.00
Switch, Type A, Single	Number	7	6.85	48.00
Switch, Type A, Quadrangle	Number	12	20.50	246.00
Weatherproof Sockets & Lamps	"	8	.40	3.00
Strain Insulators	Number	3	.23	1.00
#12 D.B.W.P., Iron, in place	Loop Miles	5.369	70.07	376.00
				$ 735.00
	Grand Total of Account . . .			1014.00

GENERAL ACCOUNT ROAD:
PRIMARY ACCOUNT NO. 18, TELEPHONE LINES:

Wire #12 Iron, D.B.W.P.	Loop Mines	4.634	68.74	319.00
Telephone Sets, Western Elec., Type 1278 H	Number	3	36.00	108.00
Telephone Booths, Frame 3'x3'	Number	2	13.00	26.00
	Grand Total of Acct.			$ 453.00

GENERAL ACCOUNT ROAD:
PRIMARY ACCOUNT NO. 19, POLES AND FIXTURES:
MAIN LINE

Iron Poles, 30', 10"-8"-6" in concrete	Number	24	60.00	1440.00
Iron Poles, 30', -8"-6"-4½" in concrete	Number	67	40.00	2680.00
Iron Poles, 30', 10"-8"-6" in concrete, ½ interest	Number	5	30.00	150.00
Iron Poles, 30', 8"-6"-4½" in concrete, ½ interest	Number	10	20.00	200.00
Cedar Poles, 70', Unpainted and unstepped, in earth	Number	1	20.20	20.00
Cedar Poles, 50', Unpainted and unstepped, on trestle	Number	28	15.70	440.00
Cedar Poles, 50', Unpainted and unstepped, in lake	Number	10	15.70	157.00
Cedar Poles, 45', Unpainted and unstepped, in earth	Number	11	9.40	103.00

PRIMARY ACCOUNT NO. 19, POLES & FIXTURES, CONTINUED
MAIN LINE:

Cedar Poles,40',Unpainted and unstepped,in earth	Number	9	7.70	69.00
Cedar Poles,35',Unpainted and unstepped,in earth	Number	102	6.45	658.00
Cedar Poles,30',Unpainted and unstepped,in earth	Number	143	5.35	765.00
Cedar Poles,50',Unpainted and unstepped, in earth 2/3 interest	Number	27	7.15	193.00
Cedar Poles,90',Unpainted and unstepped,inearth,1/2 int.	Number	1	40.00	40.00
Cedar Poles,70',Unpainted and stepped,in earth,⅓ int.	Number	2	11.50	23.00
Cedar Poles,60',Unpainted and stepped,in earth,⅓ int.	Number	23	8.20	189.00
Cedar Poles,50',Unpainted and stepped,in earth,⅓ int.	Number	38	6.30	239.00
Cedar Poles,45',Unpainted and stepped,in earth,⅓ int.	Number	9	5.50	50.00
Cedar Poles,40',Unpainted and stepped,in earth,⅓ int.	Number	101	4.55	460.00
Cedar Poles,35',Unpainted and stepped,in earth,⅓ int.	Number	37	3.80	141.00
Cedar Poles,70',Unpainted and unstepped,in earth,⅓ int.	Number	1	10.10	10.00
Cedar Poles,60',Unpainted and unstepped,in earth,⅓ int.	Number	28	7.00	196.00
Cedar Poles,55',Unpainted and unstepped,in earth,⅓ int.	Number	9	6.15	55.00
Cedar Poles,45',Unpainted and unstepped,in earth,⅓ int.	Number	11	4.70	52.00
Cedar Poles,40',Unpainted and unstepped,in earth,⅓ int.	Number	142	3.85	547.00
Cedar Poles,35',Unpainted and unstepped,in earth,⅓ int.	Number	30	3.25	98.00
Cedar Poles,30',Unpainted and unstepped,in earth,⅓ int.	Number	4	2.68	11.00
Cedar Poles,60',Unpainted and unstepped,in earth,1/3 int.	Number	6	5.45	33.00
Cedar Poles,50',Unpainted and stepped,in earth,1/3 int.	Number	16	4.20	67.00
Cedar Poles,45',Unpainted and stepped,in earth,1/3 int.	Number	6	3.70	22.00
Cedar Poles,40',Unpainted and stepped,in earth,1/3 int.	Number	54.	3.00	162.00
Cedar Poles,65',Unpainted and unstepped,in earth,1/3 int.	Number	5	5.95	30.00
Cedar Poles,50',Unpainted and unstepped,in earth,1/3 int.	Number	21	3.55	75.00
Cedar Poles,45',Unpainted and unstepped,in earth,1/3 int.	Number	2	3.16	6.00
Cross Arms,8 pin.single (4½x3½x9')	Number	49	1.00	49.00

PRIMARY ACCOUNT NO. 19, POLES & FIXTURES, CONTINUED

MAIN LINE:

Cross Arms, 8 pin, double	Number	24	2.36	56.00
Cross Arms, 6 pin, single	Number	105	0.95	100.00
Cross Arms, 6 pin, double	Number	49	2.25	110.00
Cross Arms, 4 pin, single (one brace)	No.	139	0.80	111.00
Cross Arms, 4 pin, double	Number	23	2.15	49.00
Push Pole Braces, 40'	Number	4	8.00	32.00
Head Guys, Insulated, 78 ft.	Number	37	2.40	89.00
Head Guys, Uninsulated, 87 ft.	Number	9	2.23	20.00
Anchor Guys, Insulated, 31 ft.	Number	30	6.10	305.00
				$ 10302.00

WASHINGTON STREET LINE:

Cedar Poles 65', Unpainted and stepped, in earth, ⅓ int.	Number	9	10.25	92.00
Cedar Poles, 45', Unpainted and stepped, in earth, ⅓ int.	Number	3	5.50	17.00
Cedar Poles, 65', Unpainted and stepped, in earth, 1/3 int.	Number	5	6.41	32.00
				$ 141.00

HUDSON STREET LINE:

Cedar Poles 45', Unpainted and unstepped, in earth	Number	2	9.40	19.00
Cedar Poles, 30', Unpainted and unstepped, in earth	Number	1	5.35	5.00
Cedar Poles, 70', Unpainted and unstepped, in earth, ⅓ int.	Number	1	10.10	10.00
Cedar Poles, 60', Unpainted and unstepped, in earth, ⅓ int.	Number	2	7.00	14.00
Cedar Poles, 45', Unpainted and stepped in earth, ⅓ int.	Number	1	5.50	6.00
Cedar Poles, 45', Unpainted and unstepped, in earth, ⅓ int.	Number	13	4.70	61.00
Cedar Poles, 70', Unpainted and unstepped, in earth, 1/3 int.	Number	1	6.73	7.00
Cedar Poles, 45', Unpainted and unstepped, in earth, 1/3 int.	Number	8	3.15	25.00
Cedar Poles, 40', Unpainted and unstepped, in earth, 1/3 int.	Number	15	2.55	38.00
Head Guys, Insulated, 113 ft.	Number	6	2.82	17.00
Head Guys, Uninsulated, 73 ft.	Number	3	2.08	6.00
Anchor Guys, Insulated, 31 ft.	Number	1	6.10	6.00
				214.00

INDUSTRIAL SPURS:

Cedar Poles, 60', Unpainted and Unstepped, in earth, No. 1,			14.00	14.00
Cedar Poles, 35', Unpainted and Unstepped, in earth, No. 4,			6.45	26.00
Cedar Poles, 30', Unpainted and Unstepped, in earth, No. 4,			5.35	21.00
				$ 61.00

GRAND TOTAL OF ACCOUNT 10718.00

GENERAL ACCOUNT ROAD:
PRIMARY ACCOUNT NO. 22, DISTRIBUTION SYSTEM:
MAIN LINE:

Span Wires, I.P. 59 ft.	Number	60	2.30	138.00
Span Wires, W.P., 54 ft.	Number	294	1.81	532.00
Single Pull Guys, 24 ft.	Number	260	2.48	645.00
Double Pull Guys, 42 ft.	Number	123	2.74	337.00
Strain Guys, 60 ft.	Number	158	1.95	308.00
Mast Arms, Type A	Number	4	4.95	20.00
Mast Arms, Type B	Number	92	3.95	363.00
Mast Arms, Type G	Number	31	4.65	144.00
Feeder Spans, SingleTrack	Number	2	6.15	12.00
Feeder Spans, Double Track	Number	20	8.82	176.00
Mast Arm Feeder Taps	Number	7	1.95	14.00
Suspensions, Straight Line	Number	562	1.06	596.00
Suspensions, S.L.F eeder Ears,	Number	29	1.19	35.00
Suspensions, S.L. Strain Bars	Number	17	1.14	19.00
Suspensions, Double Pull	Number	91	1.46	133.00
Suspensions, Ceiling	Number	97	.83	81.00
Live Crossings, Right Angle	Number	4	4.25	17.00
Live Crossings, Adjustable	Number	8	5.25	42.00
Ins. Crossings, Right Angle	Number	18	7.95	143.00
Ins. Crossings, Adjustable	Number	2	8.70	17.00
Strain Insulators, 1" Wood	Number	32	.31	10.00
Strain Insulators, 1¼" Wood	Number	22	.43	9.00
Section Insulators	Number	8	4.72	38.00
Trolley Frogs,	Number	43	3.47	149.00
Connection between Dbl. Trolley	Number	3	1.78	5.00
Additional Strain Ears	Number	10	.55	6.00
Wooden Trolley Trough (Estimated Cost)				56.00
Miscellaneous Small Signs	Number	27	2.00	54.00
Cable Clamps, 3 bolt	Number	4	.15	1.00
Trolley Wire, #0000, H.D. Fig. 8	Miles	.777	598.78	465.00
Trolley, Wire, #00, H.D. Round	Miles	18.125	377.04	6834.00
Feeder Wire, #500 M Cable D.B.W.R.	Miles	.673	1689.79	1137.00
Feeder Wire, #400 MCable D.B.W.P.	Miles	4.119	1385.67	5708.00
Feeder Wire, #0000 Solid Base	Miles	4.216	619.06	2610.00
Feeder Wire, #00 Solid D.B.W.P.	Miles	1.644	468.13	770.00
Feeder Wire, #00 Solid Base	Miles	4.759	405.64	1930.00
Feeder Wire, #0 Solid, D.B.W.P.	Miles	3.058	377.42	1154.00
Feeder Wire, #0 Solid Base	Miles	7.797	321.22	2504.00
Feeder Wire, #1, Solid Base	Miles	.514	259.23	133.00
Bonds, Soldered, Patented	Number	2263	.55	1245.00
Bonds, Soldered, 3' -#0000 Strand	Number	767	.60	460.00
Bonds, Soldered, 3'-#00 Strand	Number	390	.46	179.00
Bonds, Soldered, 3'#0	Number	325	.42	137.00
				$ 29,366.00

WASHINGTON STREET LINE:

Span Wires, W.P. 60 ft.	Number	14	1.86	26.00
Single Pull Guys, 10 ft.	Number	10	2.33	23.00
Double Pull Guys, 74 ft.	Number	10	2.29	23.00

GENERAL ACCOUNT ROAD:
PRIMARY ACCOUNT NO. 22, DISTRIBUTION SYSTEM: (CONTD)
WASHINGTON STREET LINE: (CONTD)

Strain Guys, 51 ft.	Number	9	1.85	17.00
Feeder Span, Double Track,	Number	1	8.82	9.00
Suspension, Straight Line	Number	32	1.06	34.00
Sustension, Double Pull	Number	8	1.46	12.00
Live Crossings, Adjustable	Number	1	5.25	5.00
Ins. Crossings, Right Angle	Number	4	7.95	32.00
Strain Insulators, 1¼	Number	1	.43	1.00
Trolley Frogs	Number	3	3.47	10.00
Trolley, #00, Round	Miles	.564	377.04	213.00
Bonds, Soldered, Patented	Number	10	.55	6.00
Bonds, Soldered, Pavement	Number	78	.55	43.00
Bonds, Soldered, 3' of #0000	Number	3	.60	2.00
Bonds, Soldered, 5½' of #0000	Number	2	.90	2.00
Bonds, Soldered, 10' of #0000	Number	2	1.43	3.00
Bonds, Soldered, 2½' of #00	Number	8	.43	3.00
Bonds, Soldered, 5½' of # 00	Number	2	.65	1.00
				$ 465.00

HUDSON STREET LINE:

Span Wires, W.P. 45 ft.	Number	20	1.71	34.00
Single Pull Guys, 29 ft.	Number	25	2.53	6300
Strain Guys, 104 ft.	Number	6	2.39	14.00
Suspensions, Straight Line	Number	14	1.06	15.00
Suspensions, Double Pull	Number	6	1.46	9.00
Trolley Frogs	Number	1	3.47	3.00
Trolley Wire, #00 Round	Miles	.397	377.04	150.00
Bonds, Soldered, 3 ft. of #00	Number	52	.46	24.00
Bonds, Soldered, 2½ ft. of #0	Number	4	.39	2.00
Bonds, Soldered, 9 ft. of #0	Number	1	.76	1.00
				$315.00

INDUSTRIAL SPURS:

Span Wires, W.P. 40 ft.	Number	10	1.66	17.00
Single Pull Guys, 29'	Number	18	2.53	46.00
Double Pull Guys, 75'	Number	3	3.04	9.00
Strain Guys, 94'	Number	18	2.39	43.00
Mast Arms, Type B	Number	5	3.95	20.00
Suspensions, S.L.	Number	25	1.06	27.00
Suspensions, D.P.	Number	7	1.46	10.00
Suspensions, Ceiling	Number	2	.83	2.00
Suspensions, Mast Arm	Number	5	.75	4.00
Strain Insulators, 1¼"	Number	4	.43	2.00
Trolley Frogs	Number	4	3.47	14.00
3-Bolt Clamps	Number	2	.15	1.00
Trolley, #00 Round	Miles	.847	377.04	319.00
Bonds, Soldered, 3' of #0000	Number	6	.60	4.00
Bonds, Soldered, 3' of #00	Number	16	.42	7.00
Bonds, Soldered, 2' of #4	Number	25	.29	7.00
				532.00

GRAND TOTAL OF ACCOUNT 30678.00

GENERAL ACCOUNT ROAD:-
PRIMARY ACCOUNT NO. 28, STATIONS:-
MAIN LINE:-

Station Houses,	Sq.Ft.	1200	@	0.40	480.00
Platform Lumber,	F.B.M.	65000	@	25.00 M.	1625.00
					$2105.00

HUDSON STREET LINE:-

Platform Lumber,	F.B.M.	250	@	25.00 M.	6.00
				GRAND TOTAL OF ACCOUNT - -	$2111.00

GENERAL ACCOUNT ROAD:-
PRIMARY ACCOUNTS NOS. 12, 25, 26, 27, 31 & 32:-

Property on Car Barn Lots, Estimated,	60000.00
Unloaded total,	431752.00

ENGINEERING, SUPERINTENDENCE & ORGANIZATION EXPENSE:-

Ten per cent of all preceding items,	43175.00

INTEREST DURING CONSTRUCTION:-

Two and one-half per cent of all preceding items,	11873.00

CONTINGENCIES:-

Five per cent of all preceding items,	24340.00

STORES:-

Amount on hand, Estimated	7500.00

EQUIPMENT:-

Miscellaneous equipment necessary for the operation of the property within the City Limits,	264625.00
G R A N D T O T A L -	$783265.00

GENERAL ACCOUNT NO. 2, EQUIPMENT:
PRIMARY ACCOUNT NO. 2, CARS:
PASSENGER CARS:

TYPE	CAR NUMBER	LENGTH OVER ALL	TRUCKS	MOTORS	BRAKES	NUMBER	PRICE	TOTAL COST NEW
D.T.Closed, J.M.Jones & Son rebuilt and equipped for P.A.Y.E.	19 and 20	32'2"	Jones	2-50 H.P.G.E.57	Hand Brakes	2	5400	10800
D.T.Semi Convertible Brill car	24	38'6"	St. Louis No. 47	4-35 H.P.G.E.1000	Air Bakes	1	6300	6300
D.T.Semi Convertible Brill Equipped for P.A.Y.E.	25 and 26	38'6"	St.Louis No. 47	4-35 H.P.G.E. West 319 B.	Air Brakes	2	6350	12700
D.T.American Car Company same reinforced with steel	28 and 29	38'6"	St.Louis No. 47	4-40 H.P.G.E. 80	" "	2	6700	13400
D.T.Maximum Traction Semi convertible Brill	30 and 32	36'0"	Brill	2-50 H.P.G.E. 57	" "	2	6200	12400
D.T.Maximum Traction Semi Convertible Brill	31 and 33	36'0"	Brill	2-40 H.P.G.E. 67	" "	2	5500	11000
D.T.Steel Car built by Moran Company	100-1-3-4-5-6-7-8 9	50'2"	Baldwin	2-90 H.P.West.304	" "	9	10000	90000
D.T.Steel Car built by the Cincinnati Car Co.	110-11-12-13-14 15	50'2"	Cincinnati Car Co	2-90 H.P. West,304	" "	6	10000	60000
D.T.P.A.Y.E. car built by McGuire Cummings Co.	201-2-3-4-5-6	45'0"	McGuire-Cummings	4-35 H.P.G.E. 226	" "	6	7000	42000
D.T.Interurban Cars built by McGuire-Cummings Co.	210-211	58'5"	McGuire-Cummings	4-75 H.P.West 305	" "	2	11000	22000

MISCELLANEOUS CARS:

S.T.Line car rebuilt from old passenger car	1	21'0"	Brill	2-50 H.P.G.E. 57	Hand Brakes	1	2750	2750
D.T.Box car rebuilt from old passenger car	2	40'0"	Taylor Trucks	4-35 H.P.G.E.1000	" "	1	3500	3500
S.T.Line car rebuilt from old passenger car	4	21'6"	-	2-35 H.P.G.E.1000	" "	1	2000	2000
10 Yard Gravel Cars, with side or bottom dump	2-3-4-5-35-36	18'0"	-			6	600	3600
Flat Cars all about the same size	0-5-6-8-11-23-24-34	19'6"	-			8	450	3600
Old J.M.Jones Car being used at gravel bar	15	31'8"	Maximum Traction	2-35 H.P.G.E.1000	" "	1	4200	4200
Old J.M.Jones car being used at gravel bar	17	31'8"	Maximum Traction	2-40 H.P.G.E. 67	Hand Brakes,	1	4300	4300
20 Yard gravel cars built by Seattle Car & Fdry.Co	201-2-3	29'0"			Air Brakes	3	1100	3300
Flat cars built by the Seattle Car & Fdry.Co.	304-5-6	33'0"	D.T.National		Air Brakes	3	900	2700
Locomotive Built by the Moran Company	300		D.T.Baldwin	4-60 H.P. West.306	" "	1	7000	7000
								317550

DEPRECIATED VALUE

Three kinds of depreciation were considered in this appraisal; first, that due to wear and tear and decay, second, obsolescence, and third, inadequacy. Almost all physical properties are subject to the first kind of depreciation; obsolescence plays a more important part in the lessening of the value of machinery than of other material things, while inadequacy is ever a factor to be considered by public service companies in growing cities.

Your engineer has worked out the depreciation of this railway by a combination of two common methods, to-wit: The inspection method and the dollar investment method. The inspection method calls for a thorough examination of all construction work, machinery, electrical equipment, and rolling stock, by a qualified engineer, who, presumably, can then determine the amount of depreciation in each case. On its face this method seems logical and fair, but practically it is only a help and a guide, for who can tell how long a rail has been in place, or what its future life will be by an examination in the field. Then, too, much construction work is under ground, requiring an impracticable amount of work for proper inspection. Happily the dollar investment method, modified by inspection, and the exercise of care and judgment, meets the issue squarely. By this method the average age of the dollar invested in any particular kind or class of property is determined, and, knowing from past experience of other similar plants what the average life of this particular class of ~~plants~~ property ought to be, the depreciation is readily determined. For example, let us.

consider a $1000.00 motor whose average natural life under certain usage is ten years, with a 20% salvage value at the end of that period, and whose age at the present time is four years; 100% - 20% divided by 10 gives an annual depreciation of 8%. Hence by the straight line method this $1000.00 machine loses $80.00 of its value each year, and for four years its depreciation would amount to $320.00, leaving a depreciation value of $680.00 at the present time. If, upon inspection, the machine was found to be so damaged as to reduce its average life of usefulness, a shorter life would be used, giving a greater per cent of annual depreciation. Your engineer has included in this report two tables, one showing the per cents of annual depreciation used (see page 34), the other showing the depreciated value of each account as calculated (see page 35).

The reader will note on page 35 that the total depreciation value of this property, as determined, is $605, 404 and that the present annual per cent of depreciation is 5.73. This would be excessive for similar railroads, but in this case allowance had to be made for the proposed regrading, during the next two years, of long stretches of Rainier Avenue, which will require a change of grade affecting approximately 7.5 miles of single track.

Per Cents of Annual Depreciations

	Average Life Years	Per Cent of Salvage	Per Cent Annual Depreciation Straight Line Method
Ballast	15.0	0.0	6.66
Ties-			
Ties in concrete	15.0	0.00	6.66
Ties on bridge	10.0	0.0	10.00
Ties on road-bed	8.0	0.0	12.50
Rails, Fastenings, and Joints	15.0	40.0	4.00
Special Work	15.0	25.0	5.00
Pavement-			
Concrete	15.0	0.0	6.66
Brick surface, heavy traffic	12.0	0.0	8.33
Brick surface, light traffic	30.0	0.0	3.33
Asphalt surface, heavy traffic	5.0	0.0	20.00
Asphalt surface, light traffic	15.0	0.0	6.66
Sand Stone surface, Heavy "	10.0	0.0	10.00
Sand Stone surface light "	25.0	0.0	4.00
Granite surface, heavy "	20.0	0.0	5.00
Track Laying and Surfacing	15.0	0.0	6.66
Bridges, Trestles and Culverts, Timber Trestles	10.0	0.0	10.0
Crossings	6.0	0.0	16.66
Signal Apparatus	20.0	0.0	5.00
Telegraph and Telephone Lines	20.0	40.0	3.00
Poles and Fixtures-			
Iron poles	33.3	0.0	3.00
Wooden poles	12.0	0.0	8.33
Distribution System	20.0	20.0	4.00
Stations, Waiting Rooms, etc.	10.0	0.0	10.00
Roadway Tools	5.0	0.0	20.00
Substation Buildings	25.0	0.0	4.00
General Office Building	20.0	0.0	5.00
Shops and Car Houses	20.0	0.0	5.00
Substation Equipment	20.0	10.0	4.50
Shop Equipment	15.0	10.0	6.00
Furniture and Fixtures	20.0	0.0	5.00
Cars-			
Wood Bodies	20.0	0.0	5.00
Steel Bodies	25.0	0.0	4.00
Trucks	20.0	0.0	5.00
Electrical Equipment	10.0	20.0	8.00

DEPRECIATED VALUE

March 1st, 1913

	Cost of Reproduction Dollars	Average Age Years	Annual Depreciation Per Cent	Annual Depreciation Dollars	Depreciated Value Dollars
Grading	$61,659	7.20	0.61	$375	$58,959
Ballast	14,460	3.00	6.66	963	11,571
Ties	21,668	3.05	14.73	3192	11,933
Rails, Fastenings and Joints	70,626	4.60	5.94	4200	51,306
Special Work	43,835	4.10	5.88	2577	33,269
Paving	63,597	3.90	7.36	4684	45,329
Track Laying & Surfacing	35,184	4.10	8.82	3104	22,458
Bridges	14,029	3.00	9.71	1362	9,943
Crossings, Etc.	1,720	3.00	16.66	287	859
Signal Apparatus	1,014	7.00	5.00	51	657
Telephone Lines, etc.	453	2.00	3.00	14	425
Poles and Fixtures	10,718	4.30	6.87	737	7,549
Distribution System	30,678	4.60	4.00	1227	25,034
Stations, etc.	2,111	5.00	10.00	211	1,055
Accounts, 12,25,26,27, 31,32	60,000	3.70	5.33	3200	48,160
Engineering, etc.	43,175	4.46	5.36	2315	32,851
Interest During Construction	11,873	4.46	5.36	637	9,034
Contingencies	24,340	4.46	5.36	1305	18,520
Stores	7,500	----	----	----	7,500
Equipment	264,625	4.00	5.44	14408	206,992
No. 1 Totals	$783,265	4.01	5.73	$44,849	$603,404
No. 2 Totals	783,265	4.30	5.34	41,830	603,404

Notes on No. 1 Totals:-

The ratio of $603,404 to $783,265 = 77.4%, which shows that the above accounts are 77.4% new. The sum of $44,849 is the present annual depreciation on the above accounts.
The present per cent of annual depreciation is 5.73% of the above accounts.

The average age of the above accounts, based on the present annual depreciation, is 4.01 years.

Notes on No. 2 Totals:-

The true average age of the above accounts is 4.3 years.
The average per cent of annual depreciation, based on the true average and the present total amount of depreciation for the above accounts, is 5.34%.

CONDEMNATION VALUE
OF
THE SEATTLE, RENTON & SOUTHERN RAILWAY CO.

- - - - - - - - -

In a previous chapter of this report will be found an analysis of Judge Harlan's statement as to the method of ascertaining value, from which your engineer concluded that a knowledge of five things was necessary, viz:-

1. Original cost of the plant account as shown by the books of the company;
2. Cost of reproduction new;
3. Depreciated value;
4. Commercial value;
5. Net earning power.

These things must be considered, but how and to what degree is each related to the other, Judge Harlan wisely, perhaps, omitted to say. Here again permit me to quote from an opinion of the public service commission of the second district, State of New York, in the matter of the application of the Westchester Street Railway Company for the authorization to issue stock, dated April 24, 1912. On page 27, referring to an analysis of Judge Harlan's statement, is found:-

> "Itdoes not limit consideration to these matters, but expressly recognizes there may be others, offering however no indication of what they may be. Merely pointing out what matters should be considered in the decision of a question, by no stretch of imagination can be treated as a rule for consideration. We are told, that we should consider four well known theories for arriving at value, and such other facts as may be material or pertinent, and we are given no further aid except the suggestion that these matters should be given such weight as may be just and right in each case. In this last is the crux of the whole matter. It is beyond question that if we make reproductive cost the test of value, a result will be reached in the great majority of cases, different from that which would follow

either from commercial valuation or from capitalization of net earnings.

"This is undoubtly the case in the comparison of any two theories. The capitalization of net earnings will rarely, if ever, produce the same amount as commercial valuation. If one of these methods is adopted in its entifety, such adoption necessarily excludes the others. If all are to be considered, what relative weight is to be given each? We are justified in inquiring whether there is a definite and defensible principle which can be followed, or whether guess work, speculation and caprice, are determining factors in any given case. This is the really important point in the working of the so-called rule, which analysis discloses not to be a rule, but enumeration of different and possibly discordant theories to be considered."

After a most comprehensive and profound discussion of value the New York Commission, in this same case, decides to give the greatest weight to the net earning power of the property, as will be noted on page 45 of that report which reads:-

"The reproductive cost is precisely the same whether the rental returns be great or small. What the property will sell for in market, which constitutes its exchange value, depends upon the rental which can be obtained and not upon the cost or reproductive cost. Such considerations need not be enlarged upon. It is sufficient to say that the reproductive cost is not the one element which makes property attractive to an intended purchaser. The attraction lies in the returns which it will afford."

The final decision in this particular case illustrates, perfectly, the beautiful inconsistencies of all things human, for the New York Commission with the following facts at hand, to-wit;

(1)	Cost of reproduction, new	$862,839.00
(2)	Depreciated Value,	$445,693.00
(3)	Property recently sold for,	$882,400.00
(4)	Never had been any net earnings, but always a deficit.	

decided that the "value" of the road at the time of purchase did exceed the sum of $400,000.00." The Writer's candid opinion of that decision is that the depreciated value of $445,693.00 was actually and practically given the greatest weight. Be that as it may, in our case, your engineer cannot intelligently determine

the value of this plant on the basis of net earnings for lack of data locked in the company's books. However, from a letter dated January 13th, 1911, to Wm. J. Bothwell, City Comptroller, from W. R. Crawford, showing a statement of moneys due the city for calendar year 1910, your engineer has a clue as to what the gross earnings of the company are.

In that letter will be found the following statements:

(1)	Total passenger mileage north of Kenyon Street,	666784 miles
(2)	" " " south of " "	208596 "
(3)	Passenger receipts,	$229296.78
(4)	76% of same,	174265.55
(5)	2% to the City,	3485.30
(6)	Total freight mileage north of Kenyon Street,	10329 miles
(7)	" " " south of " "	12363 "
(8)	Freight, mail and advertising earnings,	$ 28468.18
(9)	45% of the same,	12810.00
(10)	2% to the City,	256.20
(11)	Total to the City,	3741.50

These statements establish the fact that for the calendar year of 1910 the gross income of the company north of Kenyon Street was $187,075.00; for our purpose the gross receipts within the city limits for the calendar year 1912 are desired and have been estimated to be $224,489.99. Having the gross receipts, next comes the question of operating expenses. How much were they, or better what per cent of the gross income should be charged to operating expenses? In the Fifth Annual Report of the Public Service Commission, Second District, State of New York, for year 1911, Vol.11, on page 229 and 230, will be found Table 202 entitled, Income Account for Operating Electric Railroad Corporations, year ending June 30, 1911; from which your engineer drew off the following table of figures which shows the gross earnings and the operating expenses, including taxes, of eighteen companies for the year ending June 30, 1911.

COMPANY NUMBER	GROSS INCOME	OPERATING EXPENSES
11	$ 613,619	$420,829
12	589,194	464,917

(Table Continued.)

COMPANY NUMBER	GROSS INCOME	OPERATING EXPENSES
14	$463,551	$235,757
15	421,321	268,492
16	406,203	207,054
17	391,596	266,108
18	173,578	102,028
18½	211,172	196,499
19	365,968	228,206
20	329,135	197,940
21	316,060	231,975
22	280,224	211,718
23	228,585	187,293
24	218,461	218,043
25	216,538	214,771
26	188,433	134,405
27	176,208	122,219
28	173,526	106,672
	$5763,372	$4,014,926

Hence the ratio of $\frac{4014926}{5763372}$ shows that 70% of the gross income is a close approximation of the average operating expenses of the companies considered. But New York is a long ways away so perhaps you object to that per centage being used in Seattle. From data at hand your engineer finds this percentage for the Railway System of the Everett Railway Light & Water Co. averaged 62.35 for the years 1909, 1910 and 1911, while for the same period the Railway System of the Whatcom County Railway & Light Company showed a percentage of 70.27. Obviously a percentage of 60 is fair to the company and will be used.

Elsewhere in this report the average annual depreciation was found to be 5.34% of $783,265 or $41,830.00. After the completion of Rainier Avenue regrade work this percentage will decrease, hence for our purpose 5% of $783,265 or $39,163 will be fair to the company. Summing up, we have -

(1)	Gross earnings,		$224,489.00
(2)	Operating expenses, 60%	224489,	134,693.00
(3)	Revenue after deduction,		89,796.00
(4)	Annual depreciation,		39,163.00
(5)	Net income to capitalize,		50,633.00

Financiers plead for a high rate of net return before our public service commissions, but prefer to capitalize on the basis of small percentages. Some of the bankers at the hearing before the State Public Service Commission in the case of the Everett Railway, Light and Power Company testified that 10% was a fair rate of net return. One in particular testified that he would not invest a dollar in a public service corporation unless he could have a net return of 10%. If the above sum of $50,633.00 were capitalized at 10%, $506,330.00 would be the result. Some attorneys and engineers representing claimants against the rates charged by public service corporations, plead for as low a rate of return as 5%; $50,633.00 capitalized at 5% equals $1,012,660.00. Hence on the basis of net earnings as determined from assumed data the market value of this property might range anywhere from $506,330.00 to $1,012,660.00.

The commercial value is, in this case, too vague and indefinite for consideration, but the Depreciated Value of the Seattle, Renton & Southern Railway Company is of importance. This term "depreciated value" is often confused with the market value, the sale value, and the condemnation as being one and the same; only by a mere coincidence is this true. Perhaps a better term to use is, present physical condition. No sane business man would consider the market value of the Seattle Times, or any other successful newspaper to be the second-hand value of its office fixtures, furniture, printing presses, etc. Organization and years of advertising to build up a business constitutes an element of value for sale purposes in the case of a railway as well as of a newspaper; only in degree do the two cases differ.

The question of depreciation is of more importance in case of sale or condemnation than it is for rate-making purposes. Just so long as a property is giving reasonable service, reasonable rates would be the same whether the plant were 85% new or 75% new, whereas the logical sale price would differ by ten per cent.

The experience of your engineer convinces him that there is,as a rule, a decided relation between the depreciation (the difference between the cost of reproduction and the depreciated value) and the cost of developing the business. Permit me to digress here in order to define certain terms sometimes confused with cost of developing a business. They are Good Will Going Value and Development Expenses. Good will of a public service corporation under the control of our State Public Service Commission represents that certain element or elements which will enable the property to earn more than a fair rate of return upon the cost of reproduction new. Your engineer considers going value and development expenses as synomous, one and the same, preferring to use the term development expenses. Development expense of a public service corporation, under the control of our State Public Service Commission is reflected by the algebraic accumulation of yearly differences between the allowable fair rate of return and the actual rate of return on the book cost of the property.

As previously stated a decided relation between depreciation and development expense has been recognized by your engineer. There are many different theories and ways, based on as many different rates of interest, compounded or otherwise, presented to courts and commissions, by mathematical freaks, for determining development expense; most of which are buncombe. In the case of the Spring

Valley Water Company v. City and County of San Francisco, et al, No. 13598, Page 657, Vol. 165, Federal Reporter, Feb. Digest; values presented by some ten or twelve experts, varied all the way from $20,000,000 to $60,000,000; the differences being accounted for by pet mathematical theories. The Judge in his despair cast them all aside and used his own good judgment. Any mathematical theory for determining good will, and development expenses, which produce a practical and reasonable result merely represents the good judgment of someone who has developed a particular mathematical formula to fit the judgment. How profound the impression, on a weak mind, when some algebraic X.Y.Z. formula produces reasonable financial results in a particular case. Is it not better to be frank and honorable and admit that a few plain, homely facts, together with good judgment is after all the basis for a fair valuation.

All fair minded students, as well as financiers, know as a rule, that public service properties do exceptionally well to earn both their operating expenses and fixed charges during the first four or five years of their existence and are seldom if ever able to set up a depreciation fund during this development period; in fact, they are lucky if they pay both the operating expenses and fixed charges thereby keeping out of the receiver's hands; thus reads the history of corporations. Consequently your engineer does not, as a rule consider practical the setting up of a depreciation fund during the early development period. Another well-known fact which must be recognized when discussing Depreciated Value is this; Most all reasonably well operated properties depreciate to a certain percentage and there oscillate slightly above and below. With the above principles and facts in mind and realizing that a plant reasonably depreciated can give just as good service, and sometimes better

service than a new plant, your engineer considers the depreciated value, $603,404.00, of this property as a foundation stone to build upon and net the condemnation value. Cost of reproduction; this is the rub, in these times of political unrest and a determination on the part of the people to control and regulate public service corporations. All selfish railroad magnates, bankers and financiers despise this term and fear its predominance, well knowing, the country over, that valuations for public service corporations upon such a basis more nearly represents true, honest value than any other one element. Mark you, now, this discussion applies to normal properties, operated in an intellegent manner, producing average earnings and not to the ill-conceived and viciously managed, or to the abnormally lucky. Many who do not admit this predominance, now, cannot fail to see that the trend is to approach this predominance, as a limit. The day of crooked manipulation of stocks and bonds in this big, fine country has reached the sunset hour. No longer is the right of the people to regulate questioned and under regulation to whom will the intangible, vague and fictitious values, if any, go? The answer is to the people who created them. Men of financial power must be satisfied with less for their own persons and be more willing to work for the honor and glory of their country and the betterment of all mankind.

For a practical application of the cost of reproduction, let us take the case of the City of Everett vs. Everett Railway, Light & Water Company, and Puget Sound International Railway & Power Cpmpany, for which all of the facts are at hand. The following is a copy of the Findings of Fact in that case by the Public Service Commission, State of Washington, to-wit:-

BEFORE THE PUBLIC SERVICE COMMISSION OF WASHINGTON.

EVERETT TRADES COUNCIL

Complaintant,

v.

EVERETT RAILWAY, LIGHT & WATER COMPANY, AND PUGET SOUND INTERNATIONAL RAILWAY & POWER COMPANY,

Respondents.

No. 328.

FINDINGS OF FACT

CITY OF EVERETT,

Complainant,

v.

EVERETT RAILWAY, LIGHT AND WATER COMPANY AND PUGET SOUND INTERNATIONAL RAILWAY & POWER COMPANY,

Respondents.

No.447.

The above entitled causes having been consolidated, came on regularly for hearing on the 1st day of February, 1912, at Everett, Washington, before the Public Service Commission of Washington.

The City of Everett appeared by Jesse J. Davis, Esq., and L. M. Price, Esq.

The respondent companies appeared by S. M. Piles, Esq., J. A. Colman, Esq., anf F. H. Brownell, Esq.

Stephen V. Carey, Assistant Attorney General, appeared for the State of Washington.

Evidence was introduced by the parties hereto, and the Public Service Commission of Washington having considered the same, and being fully advised in the premises, now makes the following

FINDINGS OF FACT

That the Everett Railway, Light & Water Company is a Corporation owning a water system which is used for the purpose of supplying

the City of Everett and its inhabitants with water for domestic and municipal use; and an electrical plant which is used for the purpose of supplying the City of Everett and its inhabitants with electric current for heat, light and power; and a street railway system which is used to supply the City of Everett and its inhabitants with transportation. The said water system, electrical plant and street railway system are operated by the respondent, Puget Sound International Railway & Power Company, under the management of the Stone-Webster Management Association, of Boston, Massachuetts.

II.

The Everett Railway, Light & Water Company, hereafter referred to as the respondent company, is an amalgamation of the Everett Water Company, and the Everett Railway & Electric Company, both of which companies were organized to assist in the development of the City of Everett, and were subsidiary concerns of the Everett Land Company.

III,

The securities outstanding against the property of the respondent company consist of the following:

CAPITAL STOCK

Common Stock, Everett Ry. L. & W. Co.	$2,000,000.

BONDS

Everett Water Company	500,000.
Everett Railway & Electric Company	825,000.
Everett Railway, Light & Water Company	1175,000.
	$2,500,000.

IV.

With the exception of $500,000. par value of bonds, of the Everett Railway, Light & Water Company, which were sold in 1909, at eighty, none of the securities of the respondent company have been

listed or sold in the open market, and no record exists of their sale price or market value.

V.

The actual cost of the property owned by the respondent company was as follows:

Water System,	$620,015
Railway System,	770,401
Light & Power System,	426,748
	$1,817,164.

VI.

The cost of reproducing new the property of the respondent company under existing condition, is as follows:-

Water System,	$786,808.
Railway System,	827,017.
Light & Power System,	459,362.
	$ 2,073,187.

VII.

The cost of reproducing new the property of the respondent company, less the accrued depreciation thereon, (the difference being generally termed the depreciated value) is as follows:-

Water System,	$657,139,
Railway System,	692,026.
Light & Power System,	355,451.
	$1704,616.

VIII.

The plant owned by the respondent company is in good operating condition, and capable of rendering efficient and satisfactory service.

IX.

The respondent company has not provided a depreciation fund/with which to renew the various parts of the plant at the end of their life, although the earnings have been sufficient to create such a fund.

X.

The earnings of the company during the last three years, over and above operating expenses, depreciation and taxes, have been as follows:-

	Water System,	Railway System,	Light & Power System.
1909	$67,972.	$51,486.	$38,986.
1910	69,140.	62,704.	55,598.
1911	66,007.	48,434.	40,121.

XI.

All of the operating expenses of the respondent company are normal, with the exception of General Expenses, which is excessive. After March 1, 1912, the operating expenses will be increased approximately $16,000 per year, owing to a new contract covering the purchase of power.

XII.

During the past ten years the plant of the respondent company has been a consistent earner, and all losses incurred during prior years have been fully recouped.

XIII.

The rates charged by the respondent company for water, electric current and railway transportation, do not differ greatly from corresponding rates charged in other cities or the State for the same service.

XIV.

The quantity of water controlled by the respondent company, and available for public use, is sufficient only for the immediate future. Assuming the continued growth of the city, the Company will be obliged to reduce the consumption by the installation of meters, or to procure an additional supply.

XV.

At the time of the investigation, the quality of the water

obtained from the several sources of supply, was good, with the exception of that obtained from Pigeon Creek No. 1, which was constantly liable to contamination. At the suggestion of the Commission the Company discontinued the use of water from this source and has secured equivalent supply.

XVI.

From a consideration of all the evidence, the Commission finds and concludes that for the purpose for which this Commission is by law authorized and directed to fix the value of public utility properties, the value of the respondent company's property devoted to the use of the public, is the sum of Two Million Dollars, divided between the several parts of the consolidated plant, as follows:

Water System	$760,000.
Railway System	798,000.
Light & Power System	
System	442,000.
	$2,000,000.

XVII.

From a consideration of all the evidence the Commission finds and concludes, that the net earnings of the respondent company may be reduced approximately $5,200 per year and still leave the Company a net return of at least eight per eent upon the value of its property; and the commission further finds and concludes that such reduction can most advantageously and equitalby be offered by reducing the monthly flat rates charged for water to residences, by the amount of $1.20 per residence per annum.

XVIII.

The Commission finds that no other further reduction in the rates and charges of the respondent company can reasonably be

at this time.

XIX.

All the foregoing findings, unless otherwise indicated, are made as of January 1, 1912.

XX.

Exhibits A and B, attached hereto, are made a part hereof, for the purpose of showing the real property owned by the respondent company which was taken into consideration by the Commission fixing the value of the company's property.

WITNESS, The Public Service Commission of Washington, this 12th day of August, 1912.

THE PUBLIC SERVICE COMMISSION OF WASHINGTON

By

Geo. A. Lee
Chairman.

Jesse S. Jones.
Commissioner.

Harry E. Wilson,
Commissioner.

ATTEST

F. H. LARNED.
Secretary.

SVC-A

It is well to note certain general features of this case. The property includes a water system, railway system and light and power system, all operated by one company, thus broadening the application. The property is normal in that it has outstanding stocks and bonds to the amount of $4,500,000, while the Commission placed its value for rate making purposes at $2,000,000.00. The property is normal in that the earnings are reasonable, for the findings of fact read:-

> "From a consideration of all the evidence the Commission finds and concludes, that the net earnings of the respondent company may be reduced approximately $5,200 per year, and still leave the company a net return of at least eight per cent upon the value of its property."

The property is normal in that the cost of reproduction new ($2,073,187.00) is greater than the actual or book cost, ($1,817,164.00), thus allowing for the increased value of real estate and other items. The property is normal in that it is 82% new and has lost by depreciation 18%, or $368,751.00. The property is normal in that it had "not provided a depreciation fund with which to renew the various parts of the plant at the end of their life although the earnings have been sufficient to create such a fund." The property is normal in that "the plant owned by the respondent company is in good operating condtion, and capable of rendering efficient and satisfactory service." The value determined by the Commission is normal because it was within 5% of the cost of reproduction new.

The cost of reproduction new for a sale or condemnation value consists of two sums. First the sum equal to the depreciated value and second a sum equal to the depreciation. The first sum

represents present physical value, while the second sum may be considered as representing various losses and expenses, intangible or otherwise, which had to be paid, whereas the property could depreciate to a certain point without reduing its efficiency.

What would be the result if the cost of reproducing new were to be taken as the rate making value for all the public service corporations in our country? Great quantities of watered stock would be squeezed out, at the same time every honest dollar, regardless of depreciation would be held intact. Is not the guarantee of every dollar put in a public service corporation, plus or minus the increase/(or decrease mostly increase) in its real estate and similar holdings as compared with no guarantee to a man in private business, the failures of whom, we are told, amount to 90%, entailing in many cases the entire loss of the original investment, is not the comparison favorable to the corporation? Besides the guarantee of the original investment with normal rates of interest the corporation manager and owner still has perquisities in the way of fat salaries, great power, the appointment of friends and relatives to good jobs, the say as in whose bank the surpluses and cash on hand shall be deposited and a preliminary knowledge as to extensions and betterments thereby being able to make real estate investments. A great financier is of no more value to our country than a great educator or great minister of the gospel, yet the financier as guardian of the country's money drawer is able to help himself and to determine for himself what his own services are worth according to his own estimate of his own self.

Just so sure as the progress of man, the increase of population and the necessity for economy and conservation, will the iron hand of regulation increase the revenue of a struggling property ~~and~~

and decrease the revenue of a successful property to meet a fair rate of return on the cost of reproduction new. And still there will be left sufficient of incentive to improve and develop our great properties, in the way of security, perquisites, advance in position, new inventions, the betterment of mankind and all with a clean conscience. In spite of the denial by many that the cost of reproduction new has not the preponderance of consideration, more and more do the decisions of public service commissions read as in the case of A. E. Buell vs. Chicago, Milwaukee & St. Paul Railway Company, see page 481 of Vol. 1. Wisconsin Railroad Commission Reports, as follows:-

> "We have carefully considered this matter of valuation and the various elements that should be taken into account as decided by the court. Our conclusion is so near to the cost of reproduction new, that we have concluded to adopt that valuation, not because it happens to be made on any particular basis, but because it is equivalent to a composite value arrived at after taking into account the various elements suggested by the Court."

Then again in the same volume, page 528, in the re-investigation on Motion of the Commission of Passenger Rates Charges by the Minneapolis, St. Paul & Sault Ste. Marie Railway Company is found:

> "Upon what valuation is the road entitled to earn a fair income, and what rate of interest upon such valuation will yield such income? These questions were quite fully discussed in the opinion in the case of Buell v. Chicago, M. & St.P. R. R. Co., ante, and similar inquiries into the facts and principles involved in this case have led to the conclusion that an earning of 6 per cent, on an amount, that substantially agrees with the cost of reproduction new, would probably not be an unreasonably low income upon the investment.

This preponderance of consideration so impressed the Supreme Court of Minneapolis that is has ruled that practically the only element necessary to be considered in ascertaining the value of a railroad for rate-making purposes is the cost of reproductng the line.

This opinion was expressed in the case of

Steenerson et al v. Great Northern Ry. Co.
(Supreme Court of Minnesota, Oct. 20, 1897)

72 N. W., 713.

"The question whether the rates for transportation fixed by the State Railroad and Warehouse Commission are unreasonable and confiscatory, is not determined by the fact that the income under the rates as so fixed will not pay the amount of the fixed charges of the railroad. Neither can the amount at which the railroad sold years ago on mortgage foreclosure sale be taken as the basis on which to determine what are reasonable rates, but that question is determined by ascertaining what, under all the circumstances, is a reasonable income on the cost of reproducing the road at the present time."

Before making ~~finds~~ findings from the facts at hand, there remain some minor considerations for discussion. Discount on bonds, brokers' fees,,franchise value and real estate. Volumes could be written on the subject of discount on bonds, but since the reports and decisions at our State Public Service Commission give scant consideration to this matter, your engineer does not consider that matter pertnent in this case. However the Commission does consider brokers' fees, based on the following theory: that legitimate properties should not be bonded for more than 75% of their fair value and that the owners of the property should advance the remaining 25%; and that 5% on 75%, or 3.75% of 100% should be allowed for legitimate brokers' fees. This percentage of 3.75 applied to out cost of reproduction new ($783,265.00) amounts to $29,372.00. The Public Service Commission of this State does not base rates on franchise values and if a company cannot earn a fair rate of return on a franchise value, obviously it should not be considered here. This is also the practice of other states; in New York the law expressly forbids franchise values for rate-making purposes. Franchise value lies in the people who gave it and not in the favored company. Undoubtly the opposing

counsel will establish the fact that a part of the company's taxation in the past has been based upon some sum,variously estimated, representing franchise value. Only in so far as the cost of securing a franchise is reflected by the account for the Engineering Superintendence and organization expense has your engineer made an allowance for franchise value; in no case would he do otherwise unless it could be proven that a definite sum of money, or its equivalent, had been paid to the people for a franchise. Obviously the company is entitled to whatever of value it may have in the way of real estate, which is always considered to be a part of the cost of reproduction.

FINDINGS OF FACT

From a consideration of all available evidence, your engineer finds as follows,all findings being made as of March 1st,1913:

Cost of reproduction new exclusive of Real estate	$783,265.00
Depreciated value of physical plant exclusive of real estate	603,404.00
Brokers' fees on $783,265.00	29,372.00
Brokers' fees on $603,404.00	22,628.00
Cost of Reproduction new exclusive of real estate plus $29372.00 for brokers' fees	812,637.00
Depreciated value of physical plant exclusive of real estate, plus $22,628.00 for brokers' fees	626,032.00
Total depreciation	186,605.00

Apparently, on account of legal proceedings, this property is not in a normal condition; however, your engineer considers that it could be made normal under proper management and finds from the evidence at hand that the condemnation value is not less than the Depreciated Valuw of the Physical Plant Exclusive of Real Estate,

$603,404.00, plus $22,628.00 for Brokers' Fees,plus $186,605.00 to cover Development Expense and whatever of damage that may result to that portion of the property not condemned, plus whatever of real estate value there is, minus any legitimate claims for damages which the city may have.

MISCELLANEOUS INFORMATION.

Main Line, Single Track Mileage,	2.93
Main Line, Double Track Mileage,	7.02
Washington Street Line, Single Track Mileage,	0.30
Washington Street Line, Double Track Mileage,	0.24
Hudson Street Line, Single Track Mileage	0.44
Industrial Spurs, Single Track Mileage,	0.57
Total number of single track miles,	18.76
Number of miles double track in pavement,	1.10
Number of miles of single track in pavement,	0.53
Number of miles double track planked,	0.82
Number of miles single track planked,	0.09